REMARKS

Claim Amendments

Claims 36, 42 and 51 are amended to recite "wherein the device does not alter the profile of the plate containing the sample." Support for this amendment is found in the specification, e.g., at page 18, lines 15-20 and Figure 3.

Claim 36 is also amended to correct an obvious typographical error.

Claim 48 is amended to recite "wherein said one or more magnets attachable to a plate do not alter the profile of the plate containing the sample." Support for this amendment is found in the specification, e.g., at page 18, lines 15-20 and Figure 3.

Rejection of Claims 36-47 Under 35 U.S.C. §102(e)

Claims 36-47 are rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by Humphries *et al.* (U.S. Patent No. 6,954,128) with or without evidence from Kernan *et al.* (U.S. Patent No. 5,885,430).

Specifically, the Examiner states that "Humphries discloses a device for applying a magnetic field to a sample that comprises one or more magnets (120, 130) attachable to a plate 110" (Office Action, page 2). The Examiner further states that "[w]ith respect to the device being insertable into either an electrophoretic apparatus or nucleic acid sequencer adjacent to a plate containing the sample, it is noted that this limitation doesn't appear to further define the actual device because whether or not the device is insertable into either an electrophoretic or sequencer apparatus adjacent to a plate entirely depends on the structure of the unclaimed electrophoretic or sequencer apparatus and the plate"(Office Action, pages 2-3). In addition, the Examiner states that "Kernan discloses that electrophoretic apparatuses for DNA sequencing can be configured to accept standard microtiter plates. . . . Hence, Kernan evidences that Humphries, when configured as a standard microtiter plate, would have been insertable inside an electrophoretic or sequencer apparatus like that of Kernan" (Office Action, page 3).

Applicants respectfully disagree. Whether or not a device is insertable into either an electrophoretic or sequencer apparatus adjacent to a plate depends on the magnetic device, the sample plate and/or the electrophoretic or sequencer apparatus. Applicants' device is designed to have a low profile so as to be insertable underneath a sample plate disposed in a nucleic acid sequencer without the need to reconfigure the sequencer (specification, page 18, lines 18-20). Applicants also note that their invention is directed to a magnet plate that is compatible with nucleic acid sequencers and which circumvents the microparticle removal step (specification, page 3, lines 3-4). In particular, the plate allows for direct injection of nucleic acid eluted from magnetic microparticles while microparticles are *present* in the sample plate (specification, page 3, lines 4-7). As amended, Claims 36 and 42 are directed to *inter alia*, a device for applying a magnetic field to a sample, wherein the device *does not alter the profile of the plate containing the sample*, as shown in Figure 3.

The device described in Humphries *et al.* is designed such that a plate containing a sample (e.g. a microtiter plate) sits ***on top*** of the Humphries *et al.* device (see, *e.g*, column 17, lines 57-60, column 18, lines 14-20, and as particularly illustrated in Figure 9). As can be clearly seen in Figure 9 of Humphries *et al.*, the microtiter plate *sits on top* of the magnetic device, wherein only the magnetic pole tips are adjacent to the microtiter plate. The remaining components of the Humphries *et al.* device *extend well below the microtiter plate* and ***substantially alters*** *the profile of the microtiter plate* (see Figure 9). Furthermore, the Humphries *et al.* device is described as having a "footprint slightly ***larger*** than a standard micro-titer plate" (column 10, lines 49-50; emphasis added). Thus, the Humphries *et al.* device would *not* be insertable underneath a sample plate because it is not smaller than the sample plate and it clearly alters the profile of a plate containing a sample. Although Humphries *et al.* teach their device can be adapted for use with microtiter plates, commercial liquid handling robots and liquid handling dispensers (*e.g.*, column 9, lines 17-22), Humphries *et al.* do not teach how to modify their device such that it would not substantially alter the profile of a microtiter plate. Applicants also note that Humphries *et al.* describe the use of their device to prepare samples for sequencing, however, the method requires the elution of the DNA sample from the magnetic beads and the *separation* of the magnetic beads from the sample before the samples are suitable for sequencing (see Example 11, particularly column 27, lines 6-31 and steps 7-10 of the described protocol).

Kernan *et al.* disclose a device which allows the simultaneous introduction of samples into a plurality of capillary tubes directly from a microtiter plate having a standard size (see, *e.g.*, column 2, lines 18-21). However, as discussed above, the Humphries *et al.* magnetic device *substantially alters* the profile of a microtiter plate and has a footprint that is *larger* than a standard microtiter plate. Humphries *et al.* does not teach how to modify their device such that it would not substantially alter the profile of a microtiter plate. Kernan *et al.* does not evidence that the Humphries *et al.* device would be insertable into a electrophoretic or sequencer apparatus because the Humphries *et al.* device does not have a profile of a standard microtiter plate, but instead *substantially alters* the profile of a microtiter plate. Thus, Kernan *et al.* cannot evidence how the device of Humphries *et al.* would be insertable into a electrophoretic or sequencer apparatus because the Humphries *et al.* device does not have the profile of a standard microtiter plate.

Since Humphries *et al.*, either with or without evidence of Kernan *et al.*, does not teach or describe a device for applying a magnetic field to a sample, wherein the device does not alter the profile of the plate containing the sample, Claims 36, 42 and claims dependent thereon are not anticipated. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 48-51 Under 35 U.S.C. §103(a)

Claims 48-51 are rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Humphries *et al.* in view of Gombinsky (U.S. Patent No. 6,297,062).

Specifically, the Examiner states that "Humphries disclosed the set forth combination of the device as well as disclosed the use of magnetic microparticles" (Office Action, page 4). The Examiner concedes that "Humphries did not explicitly disclose combining these two things into a kit" (Office Action, page 4). But, the Examiner asserts that "Gombinski teaches that a combination of magnetic microparticles and magnet matrix can be assembled together into kit" (Office Action, page 4). Thus, the Examiner concludes that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was being made to combine the combination of magnetic microparticles and magnetic device of Humphries into a kit as taught by Gombinski" (Office Action, page 4).

Applicants respectfully disagree. Claims 48 and 51, as amended, are directed to *inter alia*, one or more magnets attachable to a plate that do not alter the profile of the plate containing the sample. As discussed above, the device of Humphries *et al.* *substantially alters* the profile of a microtiter plate. In addition, the Humphries *et al.* device has a footprint that is *larger* than a standard microtiter plate. Although Humphries *et al.* teach their device can be adapted for use with microtiter plates, commercial liquid handling robots and liquid handling dispensers (*e.g.*, column 9, lines 17-22), Humphries *et al.* do not teach how to modify their device such that it would not substantially alter the profile of a microtiter plate.

Gombinski discloses a kit comprising an immobilized matrix of magnetic particles, in combination with a flat magnet, or a matrix of magnets on a flat surface (see, *e.g.*, column 15, lines 57-64). Gombinski does not teach or suggest a kit comprising one or more magnets attachable to a plate, wherein said one or more magnets attachable to a plate do not alter the profile of a plate containing the sample. Nor does Gombinski teach or suggest how to modify the device described by Humphries *et al.,* wherein a microtiter plate sits on top of the magnetic device, to make a device for use in a kit, which comprises one or magnets attachable to a plate, wherein said one or magnets attachable to a plate do not alter the profile of a plate containing the sample.

Thus, even if improperly combined with Humphries *et al.*, Gombinsky does not teach or suggest Applicants' kits as claim in Claims 48, 51 and claims dependent thereon. Reconsideration and withdrawal of the rejection are respectfully requested.

Information Disclosure Statement

A supplemental Information Disclosure Statement (IDS) is being filed concurrently herewith. Entry of the supplemental IDS is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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